



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2019-0389; Product Identifier 2018-SW-035-AD; Amendment 39-19748; AD 2019-19-12]

RIN 2120-AA64

Airworthiness Directives; Sikorsky Aircraft Corporation Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2018-10-07 for Sikorsky Aircraft Corporation (Sikorsky) Model S-76C helicopters. AD 2018-10-07 required inspecting the engine collective position transducer (CPT). This new AD retains the requirements of AD 2018-10-07 and expands the applicability. This AD is prompted by the determination that an additional part-numbered engine CPT is affected by the same unsafe condition. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain other publications listed in this AD as of June 25, 2018 (83 FR 23355, May 21, 2018).

ADDRESSES: For service information identified in this final rule, contact your local Sikorsky Field Representative or Sikorsky's Service Engineering Group at Sikorsky Aircraft Corporation, 124 Quarry Road, Trumbull, CT 06611; telephone 1-800-Winged-S or 203-416-4299; email wcs_cust_service_eng.gr-sik@lmco.com. Operators may also log on to the Sikorsky 360 website at <https://www.sikorsky360.com>. You may review a copy of the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0389.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0389; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the regulatory evaluation, any comments received, and other information. The address for Docket Operations is Document Operations, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Nick Rediess, Aviation Safety Engineer, Boston ACO Branch, Compliance & Airworthiness Division, 1200 District Avenue, Burlington, MA 01803; telephone (781) 238-7159; email

nicholas.rediess@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2018-10-07, Amendment 39-19282 (83 FR 23355, May 21, 2018) (“AD 2018-10-07”). AD 2018-10-07 applied to Sikorsky Model S-76C helicopters with a Turbomeca, S.A., Arriel 2S1 or Arriel 2S2 engine with an engine CPT part number (P/N) 76900-01821-104 installed. The NPRM published in the Federal Register on May 23, 2019 (84 FR 23740). The NPRM was prompted by the determination that an additional part-numbered CPT is affected by the same unsafe condition identified in AD 2018-10-07. The NPRM proposed to retain all of the requirements of AD 2018-10-07, which required initial and recurring inspections of each CPT by measuring resistance, linearity resistance movement, and differential voltage, and depending on the outcome of the inspections, replacing the CPT. The NPRM also proposed to add engine CPT P/N 76900-01821-105 to the applicability. The FAA is issuing this AD to address the unsafe condition on these products.

Comments

The FAA gave the public the opportunity to participate in developing this AD. The FAA received no comments on the NPRM or on the determination of the cost to the public.

Conclusion

The FAA reviewed the relevant data and determined that air safety and the public interest require adopting this AD as proposed; however, since issuance of the NPRM,

Sikorsky issued Maintenance Manual, SA 4047-76C-2, Temporary Revision 73-10, dated June 25, 2019 (TR 73-10), to update Sikorsky Maintenance Manual, SA 4047-76C-2, Temporary Revision No. 73-08, dated September 20, 2017 (TR 73-08). The NPRM proposed to require completing certain corrective actions with TR 73-08. This final rule includes the option to use TR 73-10 for those corrective actions instead.

Related Service Information under 1 CFR part 51

The FAA reviewed Sikorsky S-76 Helicopter Alert Service Bulletin 76-73-8, Revision A, dated December 4, 2015 (ASB 76-73-8A), which specifies a one-time inspection of total resistance, linearity resistant movement, excitation voltage, and differential voltage of the CPTs using CPT Text Box P/N 76700-40009-042. The FAA also reviewed Sikorsky Maintenance Manual, SA 4047-76C-2, Temporary Revision No. 73-07, dated August 17, 2016 (TR 73-07), which specifies procedures for removing, installing, and adjusting the CPTs, and inspections of total resistance, linearity resistant movement, excitation voltage, and differential voltage of the CPTs. TR 73-07 also divides the procedures by CPT Test Box P/N by providing separate procedures for test boxes modified by Sikorsky Special Service Instructions (SSI) No. 76-96, dated August 19, 2016, which is not incorporated by reference in this AD.

Additionally, the FAA reviewed TR 73-08, which updates procedures in TR 73-07. TR 73-08 does not divide the procedures by CPT Test Box P/N as it eliminates the procedures for CPT Text Box P/N 76700-40009-042. TR 73-08 omits obsolete figures and it provides inspection results as pass or fail.

Finally, the FAA reviewed TR 73-10, which updates procedural steps and graphics in TR 73-08.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Other Related Service Information

The FAA reviewed Sikorsky S-76 Helicopter ASB 76-73-8, Basic Issue, dated August 21, 2015 (ASB 76-73-8). ASB 76-73-8 contains the same procedures as ASB 76-73-8A; however, ASB 76-73-8A updates Sikorsky's contact information for submitting a purchase order.

The FAA also reviewed Sikorsky SA 4047-76C-2-1, Temporary Revision No. 5-181, dated August 21, 2015 (TR 5-181); Task 5-20-00 of Sikorsky Airworthiness Limitations and Inspection Requirements, Publication No. SA 4047-76C-2-1, Revision 24, dated December 15, 2015 (Task 5-20-00); and Section 73-22-04 of Chapter 73 Engine Fuel and Control, of Sikorsky Maintenance Manual, SA 4047-76C-2, Revision 31, dated December 15, 2015 (Section 73-22-04). TR 5-181 specifies adding CPT inspections referenced in Section 73-22-04 to the 300-hour inspection checklist contained in Task 5-20-00.

The FAA also reviewed Sikorsky Safety Advisory No. SSA-S76-11-0002, dated May 17, 2011. This service information provides precautionary instructions to minimize hazardous situations that might result from an unreliable CPT.

The FAA also reviewed Sikorsky SSI No. 76-96, dated August 19, 2016, which specifies procedures to modify CPT Test Box P/N 76700-40009-042 and re-identify it as P/N 76700-40009-043. This one-time modification reduces the instructions to inspect the CPT and improves the inspection accuracy.

The FAA also reviewed Sikorsky SSI No. 76-87, dated July 24, 2015, and SSI No. 76-87A, Revision A, dated August 21, 2015. These SSIs specify a one-time inspection of total resistance, linearity resistant movement, excitation voltage, and differential voltage of the CPTs using CPT Text Box P/N 76700-40009-042.

Interim Action

The FAA considers this AD interim action. The design approval holder is currently developing a terminating action that will address the unsafe condition identified in this AD. Once this action is developed, approved, and available, the FAA might consider additional rulemaking.

Costs of Compliance

The FAA estimates that this AD affects 115 helicopters of U.S. Registry. The FAA estimates that operators may incur the following costs in order to comply with this AD. Labor costs are estimated at \$85 per work-hour.

The inspections take about 3.75 work-hours for an estimated cost of \$319 per helicopter and \$ 36,685 for the U.S. fleet per inspection cycle. Replacing a CPT takes about 6 work-hours and parts cost \$3,072 for an estimated replacement cost of \$3,582.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, General requirements. Under that section, Congress

charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA has determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2018-10-07, Amendment 39-19282 (83 FR 23355, May 21, 2018), and adding the following new AD:

2019-19-12 **Sikorsky Aircraft Corporation:** Amendment 39-19748; Docket No. FAA-2019-0389; Product Identifier 2018-SW-035-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2018-10-07, Amendment 39-19282 (83 FR 23355, May 21, 2018).

(c) Applicability

This AD applies to Sikorsky Aircraft Corporation Model S-76C helicopters, certificated in any category, with a Turbomeca, S.A., Arriel 2S1 or Arriel 2S2 engine with an engine collective position transducer (CPT) part number (P/N) 76900-01821-104 or 76900-01821-105 installed.

(d) Subject

Joint Aircraft System Component (JASC): 7300, Engine Fuel and Control.

(e) Unsafe Condition

This AD was prompted by reports of wear of the CPT that has resulted in several One Engine Inoperative (OEI) incidents. The FAA is issuing this AD to prevent failure of a CPT. The unsafe condition, if not addressed, could result in a reduction in power to one

engine resulting in an annunciated momentary OEI condition and subsequent emergency landing.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) Within 130 hours time-in-service (TIS):

(i) Measure resistance of each engine CPT and replace the CPT if the measured resistance is not within tolerance by following the Accomplishment Instructions, paragraphs 3.C.(1) through 3.C.(8)(b), of Sikorsky S-76 Helicopter Alert Service Bulletin ASB 76-73-8, Revision A, dated December 4, 2015 (ASB 76-73-8A), if using Test Box P/N 76700-40009-042 or by following paragraph 3.B.(11) of Sikorsky Maintenance Manual, SA 4047-76C-2, Temporary Revision No. 73-08, dated September 20, 2017 (TR 73-08) or paragraph 3.B.(11) of Sikorsky Maintenance Manual, SA 4047-76C-2, Temporary Revision No. 73-10, dated June 25, 2019 (TR 73-10), if using Test Box P/N 76700-40009-043. You are not required to use Sikorsky's CPT data sheet or submit a data sheet to Sikorsky.

(ii) Measure the linearity resistance movement of each engine CPT and replace the CPT if there is a linear abnormality or change in resistance that is not within tolerance by following the Accomplishment Instructions, paragraphs 3.D.(1) through 3.D.(14)(b), of ASB 76-73-8A, if using Test Box P/N 76700-40009-042 or by following paragraph 3.B.(12) of TR 73-08 or paragraph 3.B.(12) of TR 73-10, if using Test Box P/N 76700-40009-043. You are not required to use Sikorsky's CPT data sheet or submit a data sheet to Sikorsky.

(iii) Measure the differential voltage of each engine CPT and replace the CPT if the measured voltage is not within tolerance by following the Accomplishment Instructions, paragraphs 3.E. through 3.G.(1) of ASB 76-73-8A, if using Test Box P/N 76700-40009-042 or by following paragraph 3.B.(13) of TR 73-08 or paragraph 3.B.(13) of TR 73-10, if using Test Box P/N 76700-40009-043. You are not required to use Sikorsky's CPT data sheet or submit a data sheet to Sikorsky.

(2) Thereafter, at intervals not to exceed 300 hours TIS:

(i) If using Test Box P/N 76700-40009-042:

(A) Measure resistance of each engine CPT and replace the CPT if the resistance is not within tolerance by following paragraph 4.B.(11) of Sikorsky Maintenance Manual, SA 4047-76C-2, Temporary Revision No. 73-07, dated August 17, 2016 (TR 73-07), except you are not required to use Sikorsky's CPT data sheet or return a failed CPT to Sikorsky.

(B) Measure the linearity resistance movement of each engine CPT and replace the CPT if the movement exceeds tolerance by following paragraphs 4.B.(12)(a) through 4.B.(13)(f) of TR 73-07, except you are not required to use Sikorsky's CPT data sheet or return a failed CPT to Sikorsky.

(C) Measure the differential voltage of each CPT by following paragraphs 4.B.(14) through 4.B.(15)(h) of TR 73-07, except you are not required to use Sikorsky's CPT data sheet. If the maximum voltage is greater than 100 millivolts or the minimum voltage is less than -100 millivolts, replace the CPT.

(ii) For helicopters using Test Box P/N 76700-40009-043:

(A) Measure resistance of each engine CPT and replace the CPT if the resistance is not within tolerance by following paragraph 5.B.(11) of TR 73-07, paragraph 3.B.(11) of TR 73-08, or paragraph 3.B.(11) of TR 73-10, except you are not required to use Sikorsky's CPT data sheet or return a failed CPT to Sikorsky.

(B) Measure the resistance linearity of each engine CPT and replace the CPT if the resistance is not within tolerance by following paragraph 5.B.(12) of TR 73-07, paragraph 3.B.(12) of TR 73-08, or paragraph 3.B.(12) of TR 73-10, except you are not required to use Sikorsky's CPT data sheet or return a failed CPT to Sikorsky.

(C) Measure the differential voltage of each engine CPT and replace the CPT if the resistance is not within tolerance by following paragraphs 5.B.(13)(a) through 5.B.(13)(k) of TR 73-07, paragraph 3.B.(13) of TR 73-08, or paragraph 3.B.(13) of TR 73-10, except you are not required to use Sikorsky's CPT data sheet or return a failed CPT to Sikorsky.

(h) Credit for Previous Actions

Actions accomplished before the effective date of this AD in accordance with the procedures specified in Sikorsky S-76 Helicopter Alert Service Bulletin ASB 76-73-8, Basic Issue, dated August 21, 2015; Sikorsky Special Service Instruction SSI No. 76-87, dated July 24, 2015; or Sikorsky Special Service Instruction SSI No. 76-87, Revision A, dated August 21, 2015, are considered acceptable for compliance with the corresponding actions specified in paragraph (g)(1) of this AD.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Boston ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In

accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (j) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

(1) For more information about this AD, contact Nick Rediess, Aviation Safety Engineer, Boston ACO Branch, Compliance & Airworthiness Division, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7159; email: nicholas.rediess@faa.gov.

(2) For service information identified in this AD, contact your local Sikorsky Field Representative or Sikorsky's Service Engineering Group at Sikorsky Aircraft Corporation, 124 Quarry Road, Trumbull, CT 06611; telephone 1-800-Winged-S or 203-416-4299; email wcs_cust_service_eng.gr-sik@lmco.com. Operators may also log on to the Sikorsky 360 website at <https://www.sikorsky360.com>. You may view this referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(3) The following service information was approved for IBR on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(i) Sikorsky Maintenance Manual, SA 4047-76C-2, Temporary Revision No. 73-10, dated June 25, 2019.

(ii) [Reserved]

(4) The following service information was approved for IBR on June 25, 2018 (83 FR 23355, May 21, 2018).

(i) Sikorsky S-76 Helicopter Alert Service Bulletin ASB 76-73-8, Revision A, dated December 4, 2015.

(ii) Sikorsky Maintenance Manual, SA 4047-76C-2, Temporary Revision No. 73-07, dated August 17, 2016.

(iii) Sikorsky Maintenance Manual, SA 4047-76C-2, Temporary Revision No. 73-08, dated September 20, 2017.

(5) For Sikorsky service information identified in this AD, contact your local Sikorsky Field Representative or Sikorsky's Service Engineering Group at Sikorsky Aircraft Corporation, 124 Quarry Road, Trumbull, CT 06611; telephone 1-800-Winged-S or 203-416-4299; email wcs_cust_service_eng.gr-sik@lmco.com. Operators may also log

on to the Sikorsky 360 website at <https://www.sikorsky360.com>. Sikorsky Aircraft Corporation, Customer Service Engineering, 124 Quarry Road, Trumbull, CT 06611; telephone 1-800-Winged-S or 203-416-4299; email wcs_cust_service_eng.gr-sik@lmco.com.

(6) You may view this service information at FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

(7) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fedreg.legal@nara.gov, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Fort Worth, Texas, on September 20, 2019.

Lance T. Gant,

Director, Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2019-21564 Filed: 10/3/2019 8:45 am; Publication Date: 10/4/2019]